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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/507,120	09/10/2004	Kazutaka Hara	042771	4157
38834	7590	02/06/2006	EXAMINER	
WESTERMAN, HATTORI, DANIELS & ADRIAN, LLP 1250 CONNECTICUT AVENUE, NW SUITE 700 WASHINGTON, DC 20036			CHOWDHURY, TARIFUR RASHID	
			ART UNIT	PAPER NUMBER
			2871	

DATE MAILED: 02/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	<b>Application No.</b> 10/507,120	<b>Applicant(s)</b> HARA, KAZUTAKA	
	<b>Examiner</b> Tarifur R. Chowdhury	<b>Art Unit</b> 2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 September 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>09/10/04</u> . | 6) <input type="checkbox"/> Other: ____.  |

## DETAILED ACTION

### *Specification*

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 1-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hikmet et al., (Hikmet), USPAT 6,307,604 in view of Fukushima, USPAT 6,666,944 and Hirakata et al., (Hirakata), JP 09-113904.**

4. Hikmet discloses and shows in Fig. 3, a liquid crystal display device equipped with a collimating element that is formed using a polymeric cholesteric liquid crystal material and a backlight having a light source emitting a bright-line spectrum

Hikmet differs from the claimed invention because he does not explicitly disclose the claimed viewing angle widening element such as a diffuser and that the collimating element does not have a periodic structure (band-pass filter formed by stacking multiple layers of materials having different refractive indices).

Fukushima discloses (col. 2, lines 1-6; col. 4, lines 1-15) a band-pass filter having a thickness of less than 200 micro meters comprising a multilayer lamination of dielectric films respectively having refractive indexes. He further discloses that such a

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filter realizes flat transmission characteristics and superior cutoff characteristic relative to adjacent bands.

Fukushima is evidence that ordinary workers in the art would find a reason, suggestion or motivation to use band-pass filter that comprises a multilayer lamination of dielectric films respectively having different refractive indexes.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to use a band-pass filter that comprises a multilayer lamination of dielectric films respectively having different refractive indexes so that a filter having flat transmission characteristic and superior cutoff characteristic is obtained, as per the teachings of Fukushima.

Still lacking is the limitation such as the display device comprising a viewing angle widening element.

Hirakata discloses a liquid crystal display device equipped with a diffuser for improving the viewing angle characteristics (abstract).

Hirakata is evidence that ordinary workers in the art would find a reason, suggestion or motivation to employ a diffuser.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the display device of Hikmet when modified by Fukushima by employing a viewing angle widening element (diffuser) for the advantage of improving viewing angle characteristics, as per the teachings of Hirakata.

Further, using a band-pass filter that comprises a multilayer lamination of resin films respectively having different refractive indexes is known in the art and thus would

have been obvious to improve surface roughness.

Further, the multilayer lamination being formed through film deposition or multilayer extrusion or vapor deposition are considered as product by process limitations and thus does not further limit the structure of the claimed band-pass filter. "Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious product of the prior art, the claim is unpatentable even though the prior product was made by a different process." In re Thorpe, 227 USPQ 964, 966 (Fed. Cir. 1985). Therefore, the process limitation does not have patentable weight. See MPEP 2113.

Accordingly, claims 1-8 and 10 and 13 would have been obvious.

As to claim 9, it is common and known in the art to control the collimation degree of the light coming from the band-pass filter to set the differences between the reflection wavelength and the maximum transmission wavelength based on each purposes and thus would have been obvious.

As to claims 11 and 12, using a three-band cold cathode lamp or a light emitting diode or an electroluminescence device are common and known in the art and thus would have been obvious to obtain an optimum device.

As to claim 14, using a diffusing layer that does not cause backscattering and does not destroy polarized state is common and known in the art and thus would have been obvious for advantages such as excellent visibility (brightness).

***Conclusion***


5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tarifur R. Chowdhury whose telephone number is (571) 272-2287. The examiner can normally be reached on M-Th (6:30-5:00) Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim can be reached on (571) 272-2293. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TRC  
January 29, 2006

  
TARIFUR R. CHOWDHURY  
PRIMARY EXAMINER